

AMENDMENTS TO THE CLAIMS

In the Claims

Please amend claim 36 as follows.

1.-35. (Cancelled)

36. (Currently amended) A printed circuit board comprising:

2 a printed wiring board;

4 a plurality of components mounted on said printed wiring board; and

6 an electrically continuous conformal EMI shield coating for conformingly adhering to
surfaces of one or more regions of the printed circuit board to which the conformal coating is
applied; shield the one or more regions from electromagnetic interference, comprising,

8 a conductive coating that prevents electromagnetic waves from passing
therethrough, said conductive coating conformingly adhered to the surface of the
shielded printed circuit board region, and

10 a dielectric coating interposed between said conductive coating and
predetermined portions of each of the one or more shielded printed circuit board
regions, wherein said dielectric coating is conformingly adhered to and insulates said
predetermined portions of the one or more printed circuit board regions,

12 whereby said conductive [coating] and [said] dielectric coatings [coating each] do not
[significantly] change substantially dimensions of said printed circuit [wiring] board [and
14 said plurality of components] in said one or more printed circuit board regions to which said
conformal EMI shield [coating] is applied.

37. (Cancelled)

38. (previously amended) The printed circuit board of claim 36, wherein said one or more
regions of said conformal coating are physically contiguous.

39. (Previously amended) The printed circuit board of claim 36, wherein said printed circuit
board comprises:

a plurality of ground pads mounted in said printed wiring board, wherein said conductive coating is connected electrically to said ground pads;
a ground plane disposed in said printed wiring board; and
a ground via connected to said ground pads and said ground plane.

40. (Cancelled)

41. (Previously amended) The printed circuit board of claim 39, wherein said printed circuit board further comprises:

a shielded connector mounted on said printed wiring board, said shielded connector connected to a shielded cable through which signals travel,

wherein said ground pads comprise a ground moat mounted on printed wiring board substantially around said shielded connector and connected electrically to a shield of said connector and to said ground plane.

42. (Previously amended) The printed circuit board of claim 36, wherein said regions of said conformal coating comprise:

a first region coating at least a portion of a top surface of said printed circuit board;
and

a second region covering at least a portion of a bottom surface of said printed circuit board.

43. (Cancelled)

44. (Previously amended) The printed circuit board of claim 42, wherein said printed circuit board has edge plating connected electrically to said first and second regions of said conformal coating, wherein said edge plating is electrically connected to a ground plane of said printed wiring board.

45. (Cancelled)

46. (Previously amended) The printed circuit board of claim 42, wherein said electrical connection between said first and second regions is provided by a combination of:

a first ground strip mounted on said top surface of said printed wiring board;

a second ground strip mounted on said bottom surface of said printed wiring board;
and

a plurality of ground vias disposed in said printed wiring board to connect said first and second ground strips spaced around said printed wiring board so as to contact said first and second ground strips.

47. (Previously amended) The printed circuit board of claim 42, wherein said electrical connection between said first and second regions is provided by a plurality of electrically conductive spring clips spaced around said printed wiring board to be electrically coupled with said conductive coating of said first region and said conductive coating of said second region.

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48. (Previously amended) The printed circuit board of claim 36, wherein said printed wiring board comprises signal traces formed on the surface thereof, wherein said dielectric coating and said signal traces are constructed and arranged such that said surface signal traces have a desired characteristic impedance.

49. (Cancelled)

50. (Previously amended) The printed circuit board of claim 36, wherein one or more components are coated individually with said conformal coating, wherein said conformal coating which coats the one or more components is electrically connected to said conformal coating on said printed ^{wiring} circuit board.

51. (Cancelled)

52. (Cancelled)

53. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating is comprised of a dielectric material that is thermally conductive.

54. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating has a combination of adhesion and viscosity that enables said dielectric coating to be applied

with atomization spray techniques so as to access and adhere to exposed surfaces of said one or more regions of the printed circuit board.

55. (Previously added) The printed circuit board of claim 54, wherein said dielectric coating is comprised of a plurality of successively-applied layers of dielectric material.

56. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating is thixotropic.

57. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating has a viscosity of at least 45" #2 Zahn Cup (full body).

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58. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating has a viscosity of 50-100" #2 Zahn Cup (full body).

59. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating has a viscosity of 70-95" #2 Zahn Cup (full body).

60. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating has an adhesion that enables it to pass the ASTM D-3359-83 Method A Tape Test using a 1" (25 mm wide) semi-transparent pressure-sensitive tape with an adhesion strength of 25-70 ounces per inch.

61. (Previously added) The printed circuit board of claim 60, wherein said dielectric coating has an adhesion that enables it to pass the ASTM D-3359-83 Method A Tape Test using a 1" (25 mm wide) semi-transparent pressure-sensitive tape with an adhesion strength of 25-70 ounces per inch when tested in accordance with ASTM Test Method D-3330.

62. (Previously added) The printed circuit board of claim 60, wherein said dielectric coating has an adhesion that enables it to pass the ASTM D-3359-83 Method A Tape Test using a 1" (25 mm wide) semi-transparent pressure-sensitive tape with an adhesion strength of 30-50 ounces per inch when tested in accordance with ASTM Test Method D-3330.

63. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating is formed from multiple applications each forming a layer of dielectric coating approximately 1 mil thick.

64. (Previously added) The printed circuit board of claim 36, wherein said conductive coating has a viscosity of 10-40" Zahn cup #3.

65. (Previously added) The printed circuit board of claim 64, wherein said conductive coating has a viscosity of 15-30" Zahn cup #3.

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66. (Previously added) The printed circuit board of claim 36, wherein said conductive coating has an adhesion that satisfies ASTM 5B rating.

67. (Previously added) The printed circuit board of claim 36, wherein said conductive coating adheres to said dielectric coating and other elements mounted on the printed circuit board.

68. (Previously added) The printed circuit board of claim 36, wherein said dielectric coating and said conductive coating have similar [composite resin] structures. ?

69. (Previously added) The printed circuit board of claim 36, wherein said conductive coating has an ohmic resistance of between 0.05 and 0.2 ohms per square at a film thickness of approximately 1 mil.

70. (Previously added) The printed circuit board of claim 36, wherein said conductive coating has a thickness of 1.1 ± 0.2 mils

71. (Previously added) The printed circuit board of claim 36, wherein said conformal coating is applied to regions of the printed circuit board defining regions of said conformal coating, wherein said regions of said conformal coating are connected electrically to each other.